

CLAIMS

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1. An antireflection film comprising: a transparent layer formed of a cured product of an ionizing radiation-curable resin composition; and a concave-convex portion provided on one side of the transparent layer, the concave-convex portion comprising fine concaves and convexes provided at a pitch of not more than the wavelength of light.

2. The antireflection film according to claim 1, wherein the transparent layer is backed by a transparent substrate film.

3. The antireflection film according to claim 1, wherein the transparent layer has a surface hardness of not less than H in terms of pencil hardness.

4. The antireflection film according to claim 1, which further comprises, provided on the concaves and convexes, a layer formed of a resin composition having lower light refractive index than the transparent layer.

5. The antireflection film according to claim 1, which has antistatic properties.

6. A polarizing element comprising: a polarizing plate; and, stacked on the polarizing plate, the antireflection film according to any one of claims 1 to 5.

7. A display device comprising: a display section; and, stacked or disposed on the display section in its viewer side, the antireflection film according to any one of claims 1 to 5 or the polarizing element according to claim 6.

8. A process for producing an antireflection film, comprising the steps of: providing a mold with an uneven surface having fine concaves and convexes at a pitch of not more than the wavelength of light; applying, onto the mold, an ionizing radiation-curable resin composition in an amount large enough to at least fill the concaves of the mold surface; after the application of the ionizing radiation-curable resin composition, covering the top of the applied resin composition with a transparent substrate film; after covering, curing the ionizing radiation-curable resin composition located between the transparent substrate film and the mold to produce a cured product

FOOTNOTES

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of the ionizing radiation-curable resin composition; and then separating the cured product from the mold.

9. The process for producing an antireflection film according to claim 8, wherein the transparent substrate film on its side for covering the ionizing radiation-curable resin composition is separable and which further comprises the step of separably adhering the transparent substrate film, in curing the ionizing radiation-curable resin composition to produce a cured product, onto the cured product and separating the transparent substrate film from the cured product during, before or after the separation of the cured product from the mold.

10. The process for producing an antireflection film according to claim 8, which further comprises the step of adhering the transparent substrate film, in curing the ionizing radiation-curable resin composition to produce a cured product, onto the cured product and, in separating the cured product from the mold, separating the transparent substrate film together with the cured product.

11. The process for producing an antireflection film according to claim 8, wherein the mold with an uneven surface having fine concaves and convexes is provided by forming concaves and convexes in a photosensitive resin by a laser beam interference method to produce an original mold and then producing a metallic stamper from the original mold by a plating method.

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